IN THE CLAIMS:

Please cancel claims 1-19 without prejudice or disclaimer, and substitute new claims 20-38 therefor as follows:

Claims 1-19 (Cancelled).

20. (New) A method of determining, in a noise reduction process applied to a signal affected by background noise, an update function relating a new value of estimated noise power (P_{noise_New}) with a previous value of estimated noise power (P_{noise}), said update function being a function of said previous estimated noise power (P_{noise}) and a mean input power spectral density (P_{in_PSD}), comprising the steps of:

providing a look-up table having stored therein values for said update function;

determining a current value for said mean input power spectral density (P_{in_PSD}); and

searching a corresponding value for said update function in said look-up table using said previous value of estimated noise power (P_{noise}) and said current value for said mean input power spectral density (P_{in_PSD}) as a first and a second entry for said search.

21. (New) The method of claim 20, comprising the steps of providing a look-up table having stored therein values for said update function, said update function being a function of a ratio of said mean input power spectral density (P_{in_PSD}) and said previous estimated noise power (P_{noise}).

22. (New) The method of claim 20, comprising the steps of performing said search in said look-up table based on an index computed starting from said first and

second search entries.

23. (New) The method of claim 20, wherein said values for said update function are stored in said look-up table as representative of a surface plotted against said first (x) and said second (y) entry, wherein said surface is partitioned in a plurality of regions each having a corresponding value for said update function, said constant value regions being separated by straight lines with known angular coefficients.

24. (New) The method of claim 23, comprising the step of partitioning at least one portion of said surface in a plurality (2N) of angular regions, wherein said angular regions are selected from the areas between the straight lines:

$y = j \cdot x / N$ when $P_{in\_PSD} < P_{noise}$

$y = N \cdot x / j$ when $P_{in\_PSD} >= P_{noise}$

wherein j is an integer from 1 to N, and wherein said first and second entries for the search are plotted on the x and the y-axis, respectively.

25. (New) The method of claim 23, wherein said first and second entries are plotted on the x-axis and the y-axis, respectively, and comprises the steps of subdividing said surface into:

a first portion between the line y = N.x and the x-axis, said first portion being subdivided on the basis of a linear approximation in a first plurality of regions wherein the lines partitioning said first plurality of regions define constant intervals therebetween at said x or y axis; and

a second portion comprising the remaining portion of said surface, said second portion being subdivided on the basis of a linear approximation in a second plurality of

regions wherein the lines partitioning said second plurality of regions are determined by the equation:

$$y = NH \cdot N \cdot x / j$$

wherein j is an integer from 1 to NH-1.

26. (New) The method of claim 23, wherein said first and second entries are plotted on the x-axis and the y-axis, respectively, and comprises the steps of subdividing said surface into:

a first portion between the line y = N.x and the x-axis, said first portion being subdivided on the basis of a linear approximation in a first plurality of regions wherein the lines partitioning said first plurality of regions define constant intervals therebetween at said x or y axis, and

a second portion comprising the remaining portion of said surface, said second portion being subdivided on the basis of an exponential approximation in a second plurality of regions wherein the lines partitioning said second plurality of regions are determined by the equation:

$$y = 2^j \cdot N \cdot x$$

wherein j is an integer from 1 to NH.

27. (New) A circuit for determining, in a filter for noise reduction in a signal affected by background noise, an update function relating a new value of estimated noise power (P_{noise_New}) with a previous value of estimated noise power (P_{noise}), said update function being a function of said previous estimated noise power (P_{noise}) and a mean input power spectral density (P_{in_PSD}), comprising:

a look-up table having stored therein values for said update function;

an input module for a current value for said mean input power spectral density (P_{in_PSD}); and

search circuitry associated with said look-up table for selectively searching values for said update function in said look-up table using said previous value of estimated noise power (P_{noise}) and said current value for said mean input power spectral density (P_{in_PSD}) as a first and a second entry for said search.

28. (New) The circuit of claim 27, wherein said look-up table has stored therein values for said update function being a function of a ratio of said mean input power spectral density (P_{in_PSD}) and said previous estimated noise power (P_{noise}).

29. (New) The circuit of claim 27, wherein search circuitry associated with said look-up table is configured for performing said search in said look-up table on the basis of an index computed starting from said first and second search entries.

30. (New) The circuit of claim 27, wherein said values for said update function are stored in said look-up table as representative of a surface plotted against said first (x) and said second (y) entries, wherein said surface in said look-up table is partitioned in a plurality of regions each corresponding to a given constant value for said update function, said constant value regions being separated by straight lines with known angular coefficients.

31. (New) The circuit of claim 30, wherein said at least one portion of said surfaces comprises a plurality (2N) of angular regions, wherein said angular regions are selected from the areas between the straight lines:

$$y = j \cdot x / N \qquad \text{when } P_{in\_PSD} < P_{noise}$$

$$y = N \cdot x / j \qquad \text{when } P_{in\_PSD} >= P_{noise}$$

wherein j is an integer from 1 to N, and wherein said first and second entries in the table are plotted on the x and the y-axis, respectively.

32. (New) The circuit of claim 30, wherein said values for said update function are stored in said look-up table as representative of a surface plotted against said first (x) and said second (y) entries, wherein the surface in said look-up table is partitioned into:

a first portion between the line y = N.x and the x-axis, said first portion being subdivided on the basis of a linear approximation in a first plurality of regions wherein the lines partitioning said first plurality of regions define constant intervals therebetween at said x or y axis; and

a second portion comprising the remaining portion of said surface, said second portion being subdivided on the basis of a linear approximation in a second plurality of regions wherein the lines partitioning said second plurality of regions are determined by the equation:

$$y = NH \cdot N \cdot x / j$$

wherein j is an integer from 1 to NH-1.

33. (New) The circuit of claim 30 wherein said values for said update function are stored in said look-up table as representative of a surface plotted against said first (x) and said second (y) entries, wherein the surface in said look-up table is partitioned into:

a first portion between the line y = N.x and the x-axis, said first portion being subdivided on the basis of a linear approximation in a first plurality of regions wherein the lines partitioning said first plurality of regions define constant intervals therebetween at said x or y axis; and

a second portion comprising the remaining portion of said surface, said second portion being subdivided on the basis of an exponential approximation in a second plurality of regions wherein the lines partitioning said second plurality of regions are determined by the equation:

$$y = 2^j \cdot N \cdot x$$

wherein j is an integer from 1 to NH.

34. (New) A filter comprising a circuit according to any one of claims 27-33 for estimating noise power.

35. (New) The filter of claim 34, wherein said filter is a Wiener filter.

36. (New) A mobile terminal comprising a filter according to claim 34, for noise reduction of speech signal.

37. (New) A communication network comprising a mobile terminal according to claim 36.

38. (New) A computer program project loadable in the memory of at least one computer and comprising software code portions capable of performing the method of any one of claims 20-26.